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(71) Applicant: LAB VISION CORPORATION [US/US]; 47790 Westinghouse Drive, Fremont, CA 94539 (US).

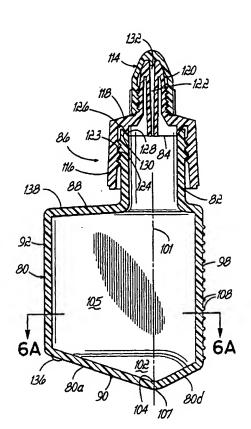
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Santander, San Ramon, CA 94583 (US). TAKAYAMA, Glenn, K.; 240 Heather Place, Danville, CA 94526 (US). WONG, Wai, Bun; 3669 Dowitcher Terrace, Fremont, CA 94555 (US). YUEN, Delia, P.; 1052 West Hill Court, Cupertino, CA 95014 (US).

- (74) Agents: FREI, Donald, F. et al.; Wood, Herron & Evans, L.L.P., 2700 Carew Tower, Cincinnati, OH 45202 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

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(54) Title: AUTOMATED TISSUE STAINING SYSTEM AND REAGENT CONTAINER



(57) Abstract: An automated staining system (10) and a reagent container (50) designed for use with the automated staining apparatus (10). The reagent container (50) includes a reagent containment section (80) capable of containing a volume of a reagent. The reagent containment section (80) includes an upper wall (88) and a base wall (90) that are spaced apart along an axis. The base wall (90) includes a well (102) having a nadir (104) that is aligned axially with an access opening in the upper wall (88) so that a reagent probe (38) entering the opening parallel to said axis will travel toward the nadir (104). In another aspect of the invention, the reagent container (50) may include a two-dimensional data element (140) containing reagent information. The staining apparatus (10) may include one removable drawer for holding reagent containers (50) and another removable drawer holding slides (12).



Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7 $\,$ B65D $\,$ G01N $\,$

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

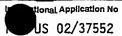
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

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Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 670 117 A (ERB HERMANN ET AL) 23 September 1997 (1997-09-23)	1-7
Y	column 1, line 39 - line 43 column 1, line 62 - line 67 column 3, line 2 - line 10; figures 2A,3	8-14
Υ	US 5 839 091 A (CORL MARK V ET AL) 17 November 1998 (1998-11-17) cited in the application column 3, line 48 - line 49; figure 18 column 12, line 54 -column 13, line 57; figure 24	8-14
A	GB 2 216 259 A (MICROVOL LTD) 4 October 1989 (1989-10-04) page 5, paragraph 2 - paragraph 3/	4-6, 11-13

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Date of the actual completion of the international search	Date of mailing of the international search report
12 September 2003	1 0. 10. 2003
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Flijswijk Tet (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Hocquet, A





alegory •	Citation of document, with Indication, where appropriate, of the relevant passages	Relevant to claim No.
	US 5 264 182 A (SAKAGAMI TOSHIO) 23 November 1993 (1993-11-23) column 5, line 22 - line 29; figure 2	1,2
(DE 94 00 010 U (POHL HJALTE ;HABER HORST DIPL ING FH (DE); SCHNEIDER JUERGEN (DE)) 24 February 1994 (1994-02-24) figure 1	1,2
1	US 5 523 047 A (CORBY KENNETH D ET AL) 4 June 1996 (1996-06-04) figures 1-3	1,7
Ą	EP 0 987 181 A (IVOCLAR AG) 22 March 2000 (2000-03-22) paragraph '0002! paragraph '0026!	1-7
4	US 5 417 121 A (HVIDTFELDT KRISTIAN J ET AL) 23 May 1995 (1995-05-23) column 9, line 15 - line 28; figure 3	1,2
ł	US 5 654 200 A (COPELAND KEITH G ET AL) 5 August 1997 (1997-08-05) column 9, line 47 - line 54; figure 14 column 12, line 27 - line 38; figure 15	8
<i>(</i>	WO 01 51909 A (LAB VISION CORP) 19 July 2001 (2001-07-19) cited in the application	15-19, 26-28
(page 12, line 8 - line 20 page 14, line 20 - line 21; claims 11-16 page 9, line 5 - line 7 page 12, line 1 - line 7	29-33 34-37
ſ	US 5 854 075 A (LEVINE MARSHALL S ET AL) 29 December 1998 (1998-12-29) column 9, line 66 -column 10, line 5	15-19, 26-28
Υ 	US 5 793 969 A (KAMENTSKY LOUIS A ET AL) 11 August 1998 (1998-08-11) column 6, line 16 - line 27	29-33
Ą	US 5 573 727 A (KEEFE RAYMOND A) 12 November 1996 (1996-11-12) column 2, line 30 - line 53; figure 1	20
4	US 5 482 839 A (MINAKAWA HIDETAKA ET AL) 9 January 1996 (1996-01-09) column 6, line 6 - line 11 column 6, line 37 - line 47 column 3, line 60 -column 4, line 14; figures 1-5	20-25
	-/	

uttoral Application No US 02/37552

		US 02/37552		
(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT				
ategory *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
4	US 3 912 456 A (YOUNG ROBERT R) 14 October 1975 (1975-10-14) column 3, line 43 - line 45; figure 1 column 7, line 3 - line 8; figure 3	21		
1	WO 00 63696 A (QUEST DIAGNOSTICS INVEST INC) 26 October 2000 (2000-10-26) page 4, line 21 -page 5, line 11; claims 2,3 page 8, line 3 - line 14; figure 4 page 13, line 8 - line 12	38,42-45		
1	EP 0 510 686 A (HITACHI LTD) 28 October 1992 (1992-10-28) column 9, line 56 - line 58; figure 4	- 15		
	*			

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-14

Reagent container and staining apparatus comprising a plurality of said reagent containers

2. Claims: 15-19, 26-28, 38-44

Staining apparatus with reagent containers carrying two-dimensional data storage elements and a robotic delivery system including a probe and an optical reader; method of staining including the reading of said two-dimensional data storage elements.

3. Claims: 20-25

staining apparatus with a drawer

4. Claims: 29-37

methods of operating a staining apparatus with a remote computer system

5. Claims: 45-53

staining method using a slide holding a tissue specimen and a two-dimensional data element and using an optical reader to decode the data element and to image the tissue specimen



Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)
This international Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)
This International Searching Authority found multiple inventions in this international application, as follows:
see additional sheet
As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this international Search Report is restricted to the invention first mentioned in the daims; it is covered by claims Nos.:
Remark on Protest The additional search fees were accompanied by the applicant's protest. X No protest accompanied the payment of additional search fees.

information on patent family members

us 02/37552

						03	02/3/552
	atent document d in search report		Publication date		Patent family member(s)		Publication date
US	5670117	A	23-09-1997	DE AT DE EP JP JP	9411517 205748 59509606 0694334 2651369 8058828	3 T 5 D1 4 A1 9 B2	17-08-1995 15-10-2001 25-10-2001 31-01-1996 10-09-1997 05-03-1996
US	5839091	A	17-11-1998	US US	2002116132 6349264		22-08-2002 19-02-2002
GB	2216259	Α	04-10-1989	NONE			
US	5264182	Α	23-11-1993	JP JP DE US	2269971 2269972 4011584 5213761	? A ! A1	05-11-1990 05-11-1990 18-10-1990 25-05-1993
DE	9400010	U	24-02-1994	DE	9400010) U1	24-02-1994
US	5523047	A	04-06-1996	US DE GB	5360133 19500043 2285616	8 A1	01-11-1994 20-07-1995 19-07-1995
EP	0987181	A	22-03-2000	DE EP JP	19842464 0987181 2000085737	. A2	23-03-2000 22-03-2000 28-03-2000
US	5417121	Α	23-05-1995	AT AT DE DE DE WO DK EP EP JP	132270 209361 69024494 69033868 69033868 9100520 678746 0478683 0678746 2708275 5309775	T D1 B D1 B T2 B T3 B A1 B A1 B B2	15-01-1996 15-12-2001 08-02-1996 03-01-2002 27-06-2002 10-01-1991 21-05-2002 08-04-1992 25-10-1995 04-02-1998 10-05-1994
US	5654200	A	05-08-1997	US US US US US US US US DE DE DE DE DE DE DE DE DE	5595707 2002072122 2002114733 6352861 2002001849 2003022391 6472217 5650327 5654199 2077452 69117052 69117052 517835 0517835 2085471 5504627 3186764 9113335	A1 B1 A1 B1 A1 B1 A A A A A A A A A A A	21-01-1997 13-06-2002 22-08-2002 05-03-2002 03-01-2002 30-01-2003 29-10-2002 22-07-1997 05-08-1997 03-09-1991 21-03-1996 14-11-1996 10-06-1996 16-12-1992 01-06-1996 15-07-1993 11-07-2001 05-09-1991

Information on patent family members

US 02/37552

					705 02/3/552
Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 0151909	Α	19-07-2001	AU CA	2634501 A 2396805 A1	24-07-2001 19-07-2001
			CN	1404573 T	19-03-2003
			EP	1247084 A1	09-10-2002
			JP	2003519791 T	24-06-2003
		,	WO	0151909 A1	19-07-2001
US 5854075	Α	29-12-1998	US	5676910 A	14-10-1997
			AU Ca	5927996 A	30-12-1996
			EP	2220049 A1 0834065 A1	19-12-1996 08-04-1998
			ĴΡ	11506826 T	15-06-1999
			WO	9641148 A1	19-12-1996
US 5793969	Α	11-08-1998	US	5587833 A	24-12-1996
			AU	1702397 A	01-08-1997
	•		WO	9725678 A1	17-07-1997
			CA	2166464 A1	19-01-1995
			EP	0707715 A1	24-04-1996
	•		IL JP	110257 A	28-09-2000
			WO	9503868 T 9502204 A1	15-04-1997 10-01-1995
			WO	9748999 A1	19-01-1995 24-12-1997
			US	5602674 A	11-02-1997
			US	5790308 A	04-08-1998
US 5573727	Α	12-11-1996	AU	671276 B2	22-08-1996
			AU	4051493 A	13-12-1993
			WO	9323732 A1	25-11-1993
			EP ·	0640209 A1	01-03-1995
			JP	8500434 T	16-01-1996
US 5482839	Α	09-01-1996	US	5290708 A	01-03-1994
			ΑU	660814 B2	06-07-1995
			AU AU	4169793 A	14-10-1993
			AU	640762 B2 7397791 A	02-09-1993 03-10-1991
			CA	2039322 A1	01-10-1991
			DE	69130303 D1	12-11-1998
			DE	69130303 T2	20-05-1999
			EP	0449321 A2	02-10-1991
			ES	2124691 T3	16-02-1999
			JP	3010509 B2	21-02-2000
			JP	4218775 A	10-08-1992
			KR US	9514745 B1 5158895 A	14-12-1995
			JP	2946831 B2	27-10-1992 06-09-1999
			JP	4230859 A	19-08-1999
			JP	5040122 A	19-02-1993
US 3912456	Α	14-10-1975	NONE		
WO 0063696	A	26-10-2000	AU	4485800 A	02-11-2000
			EP	1212617 A1	12-06-2002
			HΛ	DOCOCOC AI	26 10 2000
			WO	0063696 A1	26-10-2000
EP 0510686	Α	28-10-1992	JP JP	2692413 B2 4326063 A	17-12-1997 16-11-1992

information on patent family members

International Application No I S 02/37552

Patent document cited in search report	Publication date		Patent family member(s)	Publication date
EP 0510686 A		DE	69220714 D1	14-08-1997
		DE	69220714 T2	06-11-1997
		EP	0510686 A2	28-10-1992
		— — — — — — — — — — — — — — — — — —		

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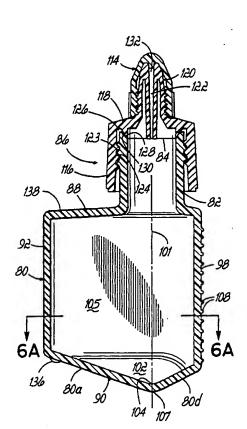
(71) Applicant: LAB VISION CORPORATION [US/US]; 47790 Westinghouse Drive, Fremont, CA 94539 (US).

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- (74) Agents: FREI, Donald, F. et al.; Wood, Herron & Evans, L.L.P., 2700 Carew Tower, Cincinnati, OH 45202 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.
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[Continued on next page]

(54) Title: AUTOMATED TISSUE STAINING SYSTEM AND REAGENT CONTAINER



(57) Abstract: An automated staining system (10) and a reagent container (50) designed for use with the automated staining apparatus (10). The reagent container (50) includes a reagent containment section (80) capable of containing a volume of a reagent. The reagent containment section (80) includes an upper wall (88) and a base wall (90) that are spaced apart along an axis. The base wall (90) includes a well (102) having a nadir (104) that is aligned axially with an access opening in the upper wall (88) so that a reagent probe (38) entering the opening parallel to said axis will travel toward the nadir (104). In another aspect of the invention, the reagent container (50) may include a two-dimensional data element (140) containing reagent information. The staining apparatus (10) may include one removable drawer for holding reagent containers (50) and another removable drawer holding slides (12).



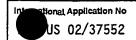


Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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А.	CLASSII	FICATION OF SUBJEC	TMATTER
TF	00.7	R65023/00	G01N1/31
TF	71. /	Kh5023700	G01N1/31

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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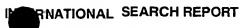
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Υ .	23 September 1997 (1997-09-23) column 1, line 39 - line 43 column 1, line 62 - line 67 column 3, line 2 - line 10; figures 2A,3	8-14
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	page 5, paragraph 2 - paragraph 3/	

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Date of the actual completion of the international search	Date of mailing of the international search report
12 September 2003	1 0. 10. 2003
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax. (+31-70) 340-3016	Authorized officer Hocquet, A

Interactional Application No IS 02/37552

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	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	
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A	US 5 417 121 A (HVIDTFELDT KRISTIAN J ET AL) 23 May 1995 (1995-05-23) column 9, line 15 - line 28; figure 3	1,2
A	US 5 654 200 A (COPELAND KEITH G ET AL) 5 August 1997 (1997-08-05) column 9, line 47 - line 54; figure 14 column 12, line 27 - line 38; figure 15	8
Υ	WO 01 51909 A (LAB VISION CORP) 19 July 2001 (2001-07-19) .cited in the application	15-19, 26-28
Y X	page 12, line 8 - line 20 page 14, line 20 - line 21; claims 11-16 page 9, line 5 - line 7 page 12, line 1 - line 7	29–33 34–37
Υ	US 5 854 075 A (LEVINE MARSHALL S ET AL) 29 December 1998 (1998-12-29) column 9, line 66 -column 10, line 5	15-19, 26-28
Y	US 5 793 969 A (KAMENTSKY LOUIS A ET AL) 11 August 1998 (1998-08-11) column 6, line 16 - line 27	29-33
Α	US 5 573 727 A (KEEFE RAYMOND A) 12 November 1996 (1996-11-12) column 2, line 30 - line 53; figure 1	20
A	US 5 482 839 A (MINAKAWA HIDETAKA ET AL) 9 January 1996 (1996-01-09) column 6, line 6 - line 11 column 6, line 37 - line 47 column 3, line 60 -column 4, line 14; figures 1-5	20-25
	-/	



Nonal Application No PUS 02/37552

(Continu	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	P. US 02	
egory °	Citation of document, with indication, where appropriate, of the relevant passages		Relevant to claim No.
	US 3 912 456 A (YOUNG ROBERT R) 14 October 1975 (1975-10-14) column 3, line 43 - line 45; figure 1 column 7, line 3 - line 8; figure 3		21
	WO 00 63696 A (QUEST DIAGNOSTICS INVEST INC) 26 October 2000 (2000-10-26) page 4, line 21 -page 5, line 11; claims 2,3 page 8, line 3 - line 14; figure 4 page 13, line 8 - line 12		38,42-45
	EP 0 510 686 A (HITACHI LTD) 28 October 1992 (1992-10-28) column 9, line 56 - line 58; figure 4		15
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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-14

Reagent container and staining apparatus comprising a plurality of said reagent containers

2. Claims: 15-19, 26-28, 38-44

Staining apparatus with reagent containers carrying two-dimensional data storage elements and a robotic delivery system including a probe and an optical reader; method of staining including the reading of said two-dimensional data storage elements.

3. Claims: 20-25

staining apparatus with a drawer

4. Claims: 29-37

methods of operating a staining apparatus with a remote computer system

5. Claims: 45-53

staining method using a slide holding a tissue specimen and a two-dimensional data element and using an optical reader to decode the data element and to image the tissue specimen



Box I Observations where certain claims were found unsearchable (Continu	uation of item 1 of first sheet)
This International Search Report has not been established in respect of certain claims under	Article 17(2)(a) for the following reasons:
Claims Nos.: because they relate to subject matter not required to be searched by this Authority,	namely:
Claims Nos.: because they relate to parts of the International Application that do not comply with an extent that no meaningful International Search can be carried out, specifically:	the prescribed requirements to such
Claims Nos.: because they are dependent claims and are not drafted in accordance with the secondary.	and third sentences of Rule 6.4(a).
Box II Observations where unity of invention is lacking (Continuation of iter	n 2 of first sheet)
This international Searching Authority found multiple inventions in this international application	n, as follows:
see additional sheet	
1. X As all required additional search fees were timely paid by the applicant, this internal searchable claims.	ional Search Report covers all
2. As all searchable claims could be searched without effort justifying an additional fee of any additional fee.	, this Authority did not invite payment
3. As only some of the required additional search fees were timely paid by the applicant covers only those claims for which fees were paid, specifically claims Nos.:	nt, this International Search Report
A. No required additional search fees were timely paid by the applicant. Consequently, restricted to the invention first mentioned in the claims; it is covered by claims Nos.:	this International Search Report is
	e accompanied by the applicant's protest. yment of additional search fees.

INTERNATIONAL SEARCH REPORT Information on patent family members

tional Application No PC-7 US 02/37552

Patent document cited in search report		Publication	1			T
		date		Patent family member(s)		Publication date
US 5670117	A	23-09-1997	DE AT DE	9411517 205748 59509606	3 T	17-08-1995 15-10-2001 25-10-2001
			EP	0694334		31-01-1996
			JP	2651369		10-09-1997
			JP	8058828	3 A	05-03-1996
US 5839091	Α	17-11-1998	US	2002116132		22-08-2002
			US	6349264	RT	19-02-2002
GB 2216259	A 	04-10-1989	NONE			
US 5264182	Α	23-11-1993	JP JP	2269971 2269972		05-11-1990
			DE	4011584		05-11-1990 18-10-1990
			US	5213761		25-05-1993
DE 9400010	U	24-02-1994	DE	9400010	U1	24-02-1994
US 5523047	Α	04-06-1996	US	5360133		01-11-1994
			DE	19500043		20-07-1995
			GB	2285616		19-07-1995
EP 0987181	Α	22-03-2000	DE	19842464		23-03-2000
			EP	0987181		22-03-2000
			JP	2000085737 		28-03-2000
US 5417121	Α	23-05-1995	AT	132270		15-01-1996
			AT DE	209361 69024494		15-12-2001
			DE	69033868		08-02-1996 03-01-2002
			DE	69033868		27-06-2002
			WO	9100520		10-01-1991
	_		DK	678746		21-05-2002
			EP Ep	0478683 0678746		08-04-1992 25-10-1995
			ĴΡ	2708275		04-02-1998
			US	5309775		10-05-1994
US 5654200		05-08-1997	US	5595707		21-01-1997
			US	2002072122	A1	13-06-2002
			US	2002114733		22-08-2002
			US	6352861		05-03-2002
			US US	2002001849 2003022391		03-01-2002 30-01-2003
			US	6472217		29-10-2002
			US	5650327	Α	22-07-1997
			US	5654199		05-08-1997
			CA	2077452		03-09-1991
			DE De	69117052 69117052		21-03-1996 14-11-1996
			DK	517835		10-06-1996
			EP	0517835		16-12-1992
			ES	2085471	T3	01-06-1996
			JP	5504627		15-07-1993
			JP WO	3186764 9113335	B2	11-07-200 05-09-199

nformation on patent family members

us 02/37552

Data day and	T	Dubling the		Data at 4:1		I But I'm
Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 0151909	Α	19-07-2001	AU	2634501		24-07-2001
			CA	2396805	A1	19-07-2001
			CN	1404573	T	19-03-2003
			EP	1247084	A1	09-10-2002
			JP	2003519791		24-06-2003
			WO	0151909		19-07-2001
US 5854075	Α	29-12-1998	US	5676910	Α	14-10-1997
			AU	5927996	Α	30-12-1996
			CA	2220049	A1	19-12-1996
			EP	0834065		08-04-1998
			JP	11506826		15-06-1999
			WO	9641148		19-12-1996
US 5793969	A	11-08-1998	US	5587833	Α	· 24-12-1996
	••	12 03 1330	AU	1702397		01-08-1997
			WO	9725678		17-07-1997
			CA	2166464		19-01-1995
		•	EP	0707715		24-04-1996
		•	IL	110257		28-09-2000
	-		JP	9503868		15-04-1997
			WO	9502204		19-01-1995
			MO	9502204		24-12-1997
			US	5602674		11-02-1997
			US	5790308		04-08-1998
US 5573727		12-11-1996	 AU	671276	D2	22-08-1996
03 33/3/2/	А	12-11-1990	AU	4051493		13-12-1993
			WO	9323732		25-11-1993
			EP	0640209		
			JP	8500434		01-03-1995 16-01-1996
US 5482839		09-01-1996	US	5290708	Λ	01-03-1994
03 3402039	A	03-01-1330	AU	660814		01-03-1994
			AU	4169793		14-10-1993
•			AU	640762		02-09-1993
			AU	7397791 2039322		03-10-1991
			CA			01-10-1991
			DE	69130303		12-11-1998
			DE	69130303		20-05-1999
			EP	0449321		02-10-1991
			ES	2124691		16-02-1999
			JP	3010509		21-02-2000
			JP	4218775		10-08-1992
			KR	9514745		14-12-1995
			US	5158895		27-10-1992
			JP ·	2946831		06-09-1999
			JP	4230859		19-08-1992
			JP	5040122	A	19-02-1993
		14-10-1975	NONE			
US 3912456	Α					
US 3912456 WO 0063696	A A	26-10-2000	AU	4485800	Α	02-11-2000
		26-10-2000	AU EP	4485800 1212617		02 - 11-2000 12 - 06-2002
		26-10-2000			A1	
		26-10-2000	EP	1212617	A1 A1	12-06-2002

at	ional A	pplication No
U	S 02	/37552

	Т		02/37552	
Patent document cited in search report	Publication date		Patent family member(s)	Publication date
EP 0510686 A		DE DE EP	69220714 D1 69220714 T2 0510686 A2	14-08-1997 06-11-1997 28-10-1992
				·
			•	
•				
				·